

Abstract

This paper reviews major developments in the Internet, which has grown from less than 1 million in 1987 to over 1.2 billion fixed line users in 2007. It focuses on developments in five areas: networks, grids, multilingualism, multiple forms of knowledge and a need to study underlying cultural themes. While the trend to scan tens of millions of books and cultural objects marks an important step forward, it is necessarily a first step rather than a final goal. The new commitment to digitization of knowledge requires new levels of bibliographical control, new sensitivity to cultural differences in terms of what we say, express, do and know and a new commitment to explore underlying themes we have in common.

1. Introduction 2. Networks 3. Grids 4. Multilingualism 5. Knowledges
6. Underlying Cultural Themes 7. Conclusions

Introduction

In the ten years since EVA came to Moscow as an idea and a vision, the networked world of computers has changed dramatically. In 1987, the world had less than a million Internet users. In 1997, Russia had less than a million users. In 2007, the number of users in Russia is 28 million¹, more than all the users in the United Kingdom. This is part of a larger trend. In 2007, Brazil has 39 million users, more than all the users in France. In June 2007, Europe had 91 million more users than the US and Asia had 187 million more users than the US. The United States, which seemed to be at the centre of Internet developments in 1987, today represents 19% of users world-wide. There are now c. 1.2 billion fixed line users and it is estimated that there will be over 750 million mobile Internet users by the end of the year, which means that in 2008 there will be over 2 billion Internet users. India has produced a Simputer (Simple Computer) designed to be used even by illiterate persons. Meanwhile, a new company in India is working on a \$70 computer which plans to reach a further 1 billion persons in the next decade. At this rate, well over 3 billion persons will have access to the Internet by 2020. Given developments in digital radio and television transmission, and ongoing work to produce mobile Internet devices for as little as \$10, for the first time ever, there is a possibility of creating a communication infrastructure, which will affect literally everyone.

Of course, the vision of reaching anyone, anytime, anywhere is hardly new. It was implicit in the vision of a global brain (*Gehirn der Welt*), which became a serious topic a century ago in 1907 and sparked a series of complementary visions in the course of the 20th century.² When we look more closely at these visions of the past century we are confronted with a major paradox. What seems to be at first sight the mega-success story of all time, has a parallel story, wherein even the most optimistic proponents of new technologies have been caught off-guard, and where the very success of growth has threatened to cripple the radically growing system.

The year 2007 marks the beginning of a new chapter in the development of High Energy Physics. The Large Hadron Collider at Geneva has computing needs that exceed by 100 times the computing power of the largest computer in the world. While salesmen continue to boast about the wonderful miracles of “broadband” at 1.5 Megabits per second, leading projects in the cultural field, such as NUME in Bologna or SANTI in La Coruna entail over 7 Terabytes. Banks in the Netherlands alone (c. 15 million people), produce 1 terabyte of new transaction data each month, i.e. 12 terabytes per year. Assuming an equal rate for Europe’s c. 800 million population, would mean 736 terabytes of new banking information annually for Europe alone. In a very different field, a leading digital film company in Paris exports 1 terabyte per day. An astronomer at Jodrell bank estimates that he needs 60 Gigabits/second to have online access to radio astronomy from space. Scientists at IMAX have been working since 1990 on the assumption that we shall one day have 80 Gigabit/second connections, which potentially could bring IMAX quality images into any classroom. The good news is that the frontiers continue to develop. Ten years ago a terabit a second was on the horizon. By 2004, 7 terabits had been demonstrated. Pessimists may argue that this proves how the industry is not keeping up with demand. Optimists, will note that precisely this enormous cleft between what is needed and what is available, may prove to be an efficient spur to industry to continue their remarkable expansion.

Given these enormous changes it is not enough to think in terms of moderate growth in the direction of more of the same. It is necessary to think of dramatic quantum leaps. For the purposes of this paper, we shall review changes and focus on possibilities in five areas: networks, grids, multilingualism, knowledges and underlying cultural themes.

2. Networks

When the original Internet began in England in 1968 it was strictly a military experiment. When the idea was taken over by the United States in 1969 it soon spread from the narrow fields of High Energy Physics and Astronomy to university research generally. In the first 20 years (1969-1989) the Internet expanded to a million persons. In the next 10 years (1990-2000), the advent of the World Wide Web (WWW), meant that it expanded from 1 to 200 million. In the past seven years, as it approaches two billion users, the Internet has become a phenomenon that potentially affects everyone. Already, those without Internet usually know someone who has Internet.

During the 1990s there was a rhetoric that Internet access would be available to everyone in the same way and at the same speed. By 1990, a high speed network of 100 MB was in place in North America, but only a few privileged universities and companies were part of the experimental network. In practical terms, throughput was much less. At the G7 meeting in 1995 a throughput of 27 MB/second across the Atlantic from Canada via Berlin to Brussels set a world record. Since 2000, a new generation of networks, notably CA 4 Net in Canada, GEANT in Europe, and networks connecting Japan, China and Russia mean that a global northern network at 20 terabits is almost fully in place. Meanwhile, Middle and South America, which have grown to over 100 million users, are now speaking of a North-South network that could link up with the global northern network. Africa also is developing a high speed North -South line.

In the 1990s, there was constant reference to problems of the last mile, about the fibre optic connections, which were in place in cities, but somehow did not connect to one’s building. The distance became smaller. There was talk of the last kilometre, the last hundred meters,

but even today the problem remains. Futurists talked of fibre to the home. Countries such as Canada, Japan and the Netherlands did experiments. Japan has begun with an actual plan. The US is introducing new legislation for a tiered approach to the Internet, whereby rich companies get preferential treatment over poor customers in the sending of their packets. In a world where the US represents c. 4% of the world population and will soon represent less than 15% of the Internet, there is little need why the overwhelming majority of users in Asia and Europe need to accept the choice of this small minority as the norm.

In this context, the efforts of UNESCO³ and Russia at the World Summit on the Information Society (WSIS, Geneva, 2003; Tunis, 2005), have helped to increase attention to a multi-stakeholder approach. The Geneva meeting created an action plan with a section (C8) on Cultural diversity and identity, linguistic diversity and local content.⁴ The year 2007 has seen progress on the introduction of a Top Level Domain (TLD) for Museums⁵; plans to introduce Internationalized Domain Names (IDNs)⁶ and new awareness of “need for a migration to IPv6, with its 340 trillion trillion trillion Internet Protocol addresses.”⁷

A decade ago, in keeping with the phrase in a popular film, *Field of Dreams*, there was a rhetoric of: build it and they will come. The practice, however, was often very different. Once the fibre optic line was in place, there was often no content to fill it qua everyday use, not least because the links to real users were often still missing. Here again, a decade has brought remarkable changes. In 1997, the European Union dealt with Culture in DG X (since linked with DG XXII) and through Advanced Communications and Telecommunications Systems (ACTS) in DG XIII. The cultural section of ACTS has since moved to Luxembourg as the Unit Learning and Cultural Heritage⁸, where it now part of a new Directorate on Content.⁹

Horst Forster, the head of Content, has estimated that there are 2.5 billion books in EU25; that while c. 90% of scientific information has been digitised, only c. 1% of cultural content has been digitised. Scientific publishing employs some 36,000 persons in Europe. The good news is that this provides a framework for peer-reviewed publications.¹⁰ The bad news is that costs are skyrocketing, that the public pays three times: i) for research, ii) for peer review and iii) for buying the results. The Commission is focussing on problems of preservation¹¹ and is exploring new models for access. How we move from 1% towards 100% digitisation is as yet unclear. There is a commitment in Europe to scan the content of 6 million items by 2010.¹² Meanwhile, countries such as India have a commitment to scan in 20 million books. Europe is now a smaller player in a much bigger international scene.

National networks, which took the better part of three decades (1970-2000) to become useful in everyday practice, are now becoming interoperable on an inter-national and even on a global scale. The OCLC's Worldcat has merged with RLIN's network and now offers access to over 79 million unique titles and over one billion copies of books. The Karlsruhe Virtual Catalogue (KVK)¹³ provides access to 500 million titles. The European Library (TEL), which began as more rhetoric than substance, is now in the hands of the Conference of European National Libraries (CENL).¹⁴ It is evolving into a vision of a European Digital Library (EDL) and is integrating the catalogues of 46 National Libraries. This vision goes well beyond the narrower boundaries of EU25, includes Russia's two national libraries in Moscow and Saint Petersburg, and a series of countries such as Turkey, Ukraine and Azerbaijan.¹⁵ As this process continues we shall literally have multilingual titles of hundreds of millions of items within the next decade.¹⁶

This vision of new access goes beyond titles and extends to full-text. When Father Busa started the first serious digital project in the humanities (1949-1974), a compendium of the complete works of Saint Thomas Aquinas, the work took 25 years and resulted in 52 volumes. The electronic version of the *Thesaurus Linguae Graecae* (1972-2001) entailed 12,000 volumes. The electronic *English Short Title Catalogue* entailed 125,000 volumes (1990s-).

The new millennium has seen a radical change in the scale of these projects. Raj Reddy (Carnegie Mellon University) outlined a project (2001) to scan the full text of 1 million books. Google (2004) proposed scanning the full text of 10 million books. In the meantime, there are now a half dozen of such projects with plans to scan the full texts of over 60 million texts by the year 2020. Pessimists can insist that these projects are not co-ordinated and often competing, so that there will be considerable duplication of effort. Optimists will recall that the largest library in the world in 1950 offered access to 10 million books. Hence, even a conservative estimate of 50 million unique full-text titles in the next 10-13 years points to online access to five times the size of the world's largest library a half century ago.

Meanwhile, the Internet is bringing a series of new kinds of knowledge. The Wikipedia, which began in January 2001, has since grown to over 1,400,000 articles¹⁷ in 2006 and 2,016,663 articles in 2007¹⁸ into the largest encyclopaedia in history. The English version alone is now the equivalent of 657 volumes. There are major versions in nine other languages. Wikis, which began as anonymous, unauthenticated texts are now being subjected to criteria such as references or sources for verification, objectivity vs. bias; and whether a section includes all significant viewpoints. Parallel with the enormous growth of Wiki has been the rise of blogs¹⁹ and social media.²⁰ We have cataloguing and indexing rules for books. We need new rules for cataloguing and indexing these emerging media.

Indeed, our search engines are presently focussed on hits. They list titles, articles, full text books, pictures and multimedia examples indiscriminately. Enthusiasts point to millions of hits as proof of how well these search engines are working. Realists note more soberly that not even the most brilliant user can read a million hits. In the latter 19th century, the radical rise of primary and especially secondary literature inspired a new chapter in the realm of bibliographical control. In the 21st century, as the scanning of hundreds of millions of objects and the full text of tens of millions of books and documents becomes a reality, we need a new chapter in bibliographical control. Trying to do everything at once may sound enticing but it is ultimately too naïve to be efficient.

We need to distinguish between different levels of detail, granularity, in the jargon of computer science. We need levels of search, just as in the physical world we sometimes search through classification systems, dictionaries and encyclopaedias before searching catalogues and reading the books in major libraries. Our catalogues are focussed on searching for authors (Who?) and titles (What?). Developments such as Google Earth and Microsoft Live Local allow us to search for places (Where?). Some catalogues allow us to search systematically by date (When?). Needed is a system that allows us to search systematically using all six basic questions: Who? What? Where? When? How? Why? Needed also is a system which allows us to distinguish different levels of reality such that we can choose to search for physical birds (sparrow, eagle); mental birds (in literature) and metaphysical birds (e.g. the Firebird, Phoenix, and Simurgh in mythology).²¹ Traditional knowledge linked information about plants and objects on earth with names of stars, gods, heroes through mythological and cosmological systems. We need more than a scanning of systems. We need digital links to understand the connections they made.

3. Grids

The parallel development of the great Internet success story and the history of technologies that cannot keep up with user production and demands has led to an incredible surge in grid technologies with projects such as SIMDAT, COREGRID,²² EGEE (Enabling Grids for E-scienceE)²³ and Euro-Grid.²⁴ Pessimists may see the grid as stop-gap measures. Optimists will note that these developments are bringing the rhetoric of anywhere, anytime by anyone into a practical context. For the moment, these projects are focussed on e-science. At present, there is so much focus on short term results that larger questions of how the grid will work when the integration of telephony, television and computer networks (c. 2015) becomes a reality remain largely unanswered. Needed is much more work in cultural applications such that virtual reality applications in culture can be integrated with those in film, and video.

4. Multilingualism

Other challenges loom. In the first half century of the Internet, the quest was to find common languages for systems. The United States assumed that this would inevitably be English. This is no longer as obvious as it seemed even a decade ago. English is now c.30 % of the Internet. The second language is Chinese. As of January 2007, the third language of the Internet is Spanish, which now has more native speakers than English. As the Internet matures, languages, which have a major representation world-wide, are slowly coming into focus. These include French, German, Portuguese, Russian and Arabic. World Internet Statistics presently focuses attention on the top ten languages as if this were a hit-parade. But there are 6,500 languages in the world and a more subtle problem looms of giving these languages their proper “voice” in the digital world of the Internet. There are at least 547 languages in South America. Brazil alone has 195 languages. Brazil’s networks presently reflect mainly Portuguese and English. A similar case is evident in Russia. The main language of the Russian Internet is obviously Russian, with a number of sites with partial English translations. In terms of the world picture, the deeper significance of Russia is that it literally borders on all the cultures connecting East and West. It is the only major country to do so. These connections with Siberian languages, Asian, Himalayan, Arabic, Turkish and of course European languages mean that it can play a vital role in bridging world cultures.

Multilingualism is much more than an eccentric trend to speak a language or dialect that others do not understand. It is a key to maintaining the authenticity of local diversity and uniqueness, which is one of the central dimensions of culture and one of the keys to cultural identity at a deeper level. Maintaining identities with historical dimensions is thus more than a simple challenge for memory institutions. It is a key to maintaining healthy identities at the national, regional and especially at the local level.²⁵ On the surface, these diverse identities and expressions are a key to sites, which are of interest qua tourism, and thus have a significant economic dimension. At a deeper level, these diverse identities are a key to the healthy development of towns, regions and countries and thus an integral part of all economic and social prosperity. A key challenge is for these expressions of local differences to continue welcoming the existence and presence of others with other differences, and not simply becoming isolationists.

5. Knowledges

Etymologically, the words cult, culture, and agriculture are all related to the Latin verb *colo*, *colere*²⁶ (cf. the etymological links in Sanskrit between Krishna, kRR and kRSTa). Culture is

about different ways of speaking (language); different ways of doing (crafts, techniques); different ways of expressing and ultimately different ways of knowing. The early Internet experiments were necessarily about creating a common framework for interoperability across various systems, a quest for one interface for all, as if there were only a single way of doing. This is hardly the case. Some traditions focus on visual knowledge, others on oral-aural knowledge, on tactile knowledge, or on knowledge as taste (cf. *sapienza*, *savoir*). Increasingly, the challenge lies in developing multiple interfaces, which reflect the full range of different ways of saying, doing, expressing, and knowing.

These diversities are again intertwined with multilingualism and different writing systems. To take a “simple” example. Languages such as Kurdish have been recorded in Latin, Arabic and Cyrillic scripts. In the case of some letters this makes little difference. In the case of other letters this means that the Kurdish language needs to be adjusted each time to the particularities and limitations of a given writing system.²⁷ More subtle differences come when one culture (language) focusses on certain approaches: cf. the old epithet about the French are rational but not reasonable: the English are reasonable but not rational. Or when one culture talks about a theme, about which another culture tends to be silent. To emphasize these differences to their utmost extremes could tend towards a new kind of isolationism bordering on solipsism and yet to ignore these differences entirely would plunge us onto a path towards sameness with an impoverished view of the world. To save our face and faces we need multiple interfaces; systems that not only help our express our differences, but also help others understand the reasons why we are, know, do and express differently.

6. Underlying Cultural Themes

A century ago, as Freud was exploring the mysteries and irregularities of disturbed psyches, Carl Gustav Jung (1875-1961) was beginning his exploration of unexpected commonalities. His study of dreams led him to assert the existence of underlying archetypes. Jung’s younger contemporary, Aby Warburg (1866-1929), explored a parallel path in his study of *topoi* and recurrent themes in literature and art. These discoveries launched both insights and debates, which a century of scholarship has not resolved. The Warburg Institute continues to collect examples of archetypal images, while some sceptics continue to assert that no archetypes exist. Others claim that all knowledge is constructivist and thus everyone creates their own (potentially solipsistic) vision of knowledge and the world.

To understand one another’s different cultures, we need to respect differences and also to explore commonalities. The Flood story which occurs in the Bible, is one of 500 such stories.²⁸ Gaya in India is called Gaia in Greek. Basic ideas such as Mother Earth occur in most cultures. Durga in Sanskrit, *Madder Edne* among the Sami people in Siberia, *Mutter Erde* in German and *Mother Earth* in English and. The notion of three goddesses linked to three phases of the moon, and three ages of a woman is found around the world (Figure 1).

These parallels across cultures go much further than simple concepts and names. In India, we find a systematic approach, which links the evolution of human consciousness with the coming of sound and light. So sound, the dawn and morning star are a first stage, the sunrise is a second stage; mid-day is a next stage and so-on. These metaphors of sound and light are also found in Russia, Persia, Egypt, Greece and Rome. The Sanskrit word for mind, *manas* becomes the Indian goddess *Manasa*, the Tibetan Lake *Manasovar* and the Roman goddess, *Mens* (mind).

	New Moon	Full Moon	Waning Moon
	Young	Mature	Old
India	Lakshmi	Durga	Sarasvati
Sami	Uks Edne	Sar Edne	Yuks Edne
Greece	Aphrodite	Hera	Athena
Rome	Venus	Juno	Minerva
	Persephone	Demeter	Hecate

Figure 1. Parallels between Three Phases of the Moon, Three Ages of Woman in India, Sami Culture, Greece and Rome.

The dimensions of this systematic approach range from linking sounds with the 7 chakras, the 7 planets and the 7 days. The Sanskrit *sva*r (the sun, sunshine, light, lustre) becomes the Russian God of Light, *Svarog*. In English, historical periods such as the Dark Ages and the Enlightenment or expressions such as: “it dawned on me” remind us that these metaphors of consciousness shine forth in all dimensions of culture.

To explore the full scope of these aural and visual metaphors is clearly beyond the “scope” of this paper. Our purpose for mentioning them is to show that the world-wide scanning and digitizing inspired by the rise of the Internet is clearly only the beginning rather than the end of a process. Scanning of bits and bytes is important. Much more important is to use these to understand our common metaphors and respect our unique expressions.

7. Conclusions

The rise of digital media applied to the cultural domain is part of an enormous shift whereby the Internet has spread to two billion persons in the past two decades and looks likely to spread to a further billion within the next decade. The Internet is seeing the rise of networks and grids with massive projects to scan the full text of at least 60 million items by the year 2020. In Europe, the advent of a directorate on Content is one expression of these developments.

This paper insists that scanning is merely a first step in something much more profound. The big picture requires new attention to multilingualism and different ways of knowing, or to use Francis Bacon’s term, different knowledges.²⁹ To create an Internet we need interoperability with common protocols as a first step. To create a meaningful Internet we need to use those common protocols to throw light on the unique ways of doing, expressing and knowing at national, regional and especially local levels. Parallel with this need to record and express our differences, we need also to continue exploring underlying cultural themes that we have in common. Ultimately we need to work together on New Models of Culture, which maintain our uniqueness while embracing our common themes.³⁰

VMMI, Maastricht McLuhan Institute, September 2007.

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Notes

¹ Statistics are from Internet World Stats: <http://www.internetworldstats.com/stats.htm>

² For a summary of literature on this topic see the author's New Media <http://sumscorp.com/kavai/newmedia/> under World Brain. Cf. also: *Augmented Knowledge and Culture*, Calgary: University of Calgary Press, 2006.

³ Philippe Quéau, who led the Moscow UNESCO office, is now director of the Rabat Cluster Office of UNESCO which recently played a role in an: International Forum to redefine link between social science and public policy:

http://portal.unesco.org/en/ev.php-URL_ID=31677&URL_DO=DO_TOPIC&URL_SECTION=201.html

⁴ WSIS, 2003: <http://www.itu.int/wsis/docs/geneva/official/poa.html#c8>

Cf. <http://www.itu.int/wsis/c8/index.html>

⁵ Updated Proposed .MUSEUM sTLD Registry Agreement Posted for Public Comment, 31 August 2007: <http://www.icann.org/announcements/announcement-31aug07.htm>

⁶ An important impetus for this has come via Richard Delmas, EU via the ITU: [http://www.itu.int/mlds/presentations/dayone/delmas.ppt#272,1,MULTILINGUAL DOMAIN NAMES JOINT ITU/WIPO Symposium - European Perspective -](http://www.itu.int/mlds/presentations/dayone/delmas.ppt#272,1,MULTILINGUAL_DOMAIN_NAMES_JOINT_ITU_WIPO_Symposium_-_European_Perspective_-)

⁷ ICANN, TWNIC Host "Toward the New Era of Internet" in Taipei, 19-21, October 2007:

<http://www.icann.org/announcements/announcement-20sep07.htm>

⁸ Pat Manson, Digital libraries and technology enhanced learning in FP7, 22 November 2006:

http://ec.europa.eu/information_society/istevent/2006/cf/document.cfm?doc_id=2491

⁹ DG Content: http://cordis.europa.eu/ist/directorate_e/index.html

¹⁰ Horst Forster, "The i2010 digital libraries initiative: Europe's cultural and scientific information at the click of a mouse", *APE Conference*, Berlin 23 January 2007:

ftp://ftp.cordis.europa.eu/pub/ist/docs/directorate_e/speech-ape-23jan2007-v2_en.pdf

¹¹ EU Digital Preservation report, 19 April 2007 :

http://ec.europa.eu/information_society/newsroom/cf/itemlongdetail.cfm?item_id=3366

Other groups active in this important topic include the European Commission on Preservation and Access (ECPA): <http://www.knaw.nl/ecpa/map/>;

Cf. <http://www.digitalpreservationeurope.eu/resources/?search%5B%5D=19>

¹² Cf. the i2010 project. "Issue areas addressed under this priority are eInclusion, e-Accessibility, broadband/digital divide, e-Government, eHealth, digital literacy, flagship initiatives: Intelligent Car, Digital Libraries, Ageing/Ambient Assisted Living, ICT for sustainable growth (in preparation)":

http://ec.europa.eu/information_society/eeurope/i2010/what_is_i2010/index_en.htm.

For a review of developments in memory institutions see the author's:

"Memory Institutions in a Networked World," *Memory in Digits. Communication of Memory in Archives, Museums and Libraries: The Interaction of Science, Policy and Practice*, International Conference, 4-5 October, 2007, Vilnius:

<http://www.kf.vu.lt/atmintis/en/?m=2>

¹³ KVK: http://www.ubka.uni-karlsruhe.de/hylib/virtueller_katalog.html

¹⁴ CENL: <http://www.nlib.ee/cenl/contact.php>

¹⁵ TEL: http://libraries.theeuropeanlibrary.org/libraries_en.xml

¹⁶ For a survey of developments in the library world see the author's: „Keynote:

Rahmenbedingungen der digitalen Langzeitarchivierung aus politischer und wissenschaftlicher Sicht," *Digitale Langzeitarchivierung. Strategien und Praxis europäischer Kooperation, Deutschen Nationalbibliothek, anlässlich der EU-Ratspräsidentschaft Deutschlands*, 20-21. April 2007.

http://www.langzeitarchivierung.de/eu2007/modules.php?op=modload&name=PagEd&file=index&page_id=45

¹⁷ Wiki: <http://upload.wikimedia.org/wikipedia/en/4/40/English-language-wikipedia-.png>

¹⁸ Wikipedia: Size of Wikipedia: http://en.wikipedia.org/wiki/Wikipedia:Size_of_Wikipedia

¹⁹ Blogging: <http://www.caslon.com.au/weblogprofile1.htm#many>

²⁰ Social media: <http://www.caslon.com.au/socialspacesprofile.htm>

²¹ These possibilities are being explored in the SUMS demos being developed by a Russian team led by Alexander and Vasily Churanov. See: www.sumscorp.com

²² NGGD Final Report: ftp://ftp.cordis.europa.eu/pub/ist/docs/ngg2_eg_final.pdf

²³ EGEE <http://www.eu-egee.org/>

Cf. <http://cordis.europa.eu/ist/grids/index.html>; Service and Software Architectures, Infrastructures and Engineering: http://cordis.europa.eu/fp7/ict/ssai/home_en.html

²⁴ Eurogrid: <http://www.eurogrid.org/>

Cf. NGG3: ftp://ftp.cordis.europa.eu/pub/ist/docs/grids/ngg3_eg_final.pdf

²⁵ Cf. Giorgio Ruffolo, *The Unity of Diversities: Cultural Cooperation in the European Union*, European Parliament, Brussels, 2001:

http://www.labforculture.org/en/resources/research_in_focus/no_3_european_cultural_cooperation/the_unity_of_diversities_cultural_cooperation_in_the_european_union.

This document begins with an excellent survey of European policy development in the past 50 years.

²⁶ Cf. <http://tamilstudiesconference2006.blogspot.com/2006/05/culture-cultivation-and-civility-in.html>

²⁷ Kurdish (Kurdí / كوردی): <http://www.omniglot.com/writing/kurdish.htm>. The Omniglot website offers many excellent insights into these complexities, which recur in languages such as Tajik, Persian, Uzbek etc.

²⁸ *Flood Legends from Around the World*: <http://www.nwcreation.net/noahlegends.html>

Cf. Alan Dundes, *The Flood Myth*, Berkeley: University of California Press, 1988.

Conservative estimates speak of only 300 cultures. The catastrophic deluge which entered the Black Sea http://www.religioustolerance.org/ev_noah.htm

²⁹ Francis Bacon: <http://www.selfknowledge.com/53102.htm>

³⁰ A preliminary effort in this direction is being made at:

<http://sumscorp.com/kavai/newmethods/>. It is foreseen that this will become a starting point for more thorough research at a proposed European University of Culture (Berlin, Madrid, Paris and Venice) scheduled to open in September 2008.